

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

1. The application has been amended as follows:

Claims 1-20 and 22-32 have been renumbered as claims 1-16, 18-20, 17 and 21-31, respectively.

2. The following is an examiner's statement of reasons for allowance:

Prior art does not teach or suggest a method and a carrier recovery apparatus comprising: an error compensating unit that is configured to combine a complex input signal with a frequency signal to generate a complex output signal, wherein the complex output signal includes an error reference signal, wherein the error reference signal comprises at least one PN signal in a field synchronization signal of the complex input signal, and wherein the PN signal is one of a plurality of PN signals; an error detecting unit that is configured to determine location of the PN signal of the error reference signal in the complex output signal based on a real part of the complex output signal, and is configured to generate an error signal based on the determined location of the PN signal of the error reference signal in the complex output signal; and an oscillator that is configured to generate the frequency signal with a frequency that varies based on the error signal (emphasis added).

Prior art further does not teach or suggest a method and a circuit for measuring an error in a complex data signal, comprising: a field synchronization detector that is configured to determine location of a beginning and an end of an error reference signal in the complex data signal based on a real number representation of the complex data signal; and a frequency error measuring unit that is configured to measure a variation in a phase angle of the complex data signal based on the location of the error reference signal in the complex data signal, and is configured to generate an error signal based on the variation in the phase angle of the complex data signal, wherein the error reference signal comprises at least one PN signal in a field synchronization signal of the complex input signal, and the PN signal is one of a plurality of PN signals, wherein the location of the error reference signal is the location of the PN signal (emphasis added). Prior art also does not teach or suggest the combination of field synchronization detector, frequency error measuring unit, delayer, conjugate signal generator, first multiplier, imaginary number generator, real number generator, second multiplier, operation unit and a third multiplier as claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Ahn whose telephone number is (571) 272-3044. The examiner can normally be reached on Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Sam K. Ahn/
Primary Examiner, Art Unit 2611

6/5/2008